

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)**

Current Human Exposures Under Control

Facility Name: Okanogan Airport
Facility Address: AIRPORT RD, OKANOGAN, WA 98840--0000
Facility EPA ID #: WAD988480273

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

If yes - check here and continue with #2 below.
 If no - re-evaluate existing data, or
 if data are not available skip to #6 and enter "IN" (more information needed) status code

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**¹ above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

| | <u>Yes</u> | <u>No</u> | <u>IN</u> | <u>Rationale / Key Contaminants</u> |
|-----------------------------|------------|-----------|-----------|-------------------------------------|
| Groundwater | | X | | |
| Air (indoors) ² | | X | | |
| Surface Soil (e.g., <2 ft) | | X | | |
| Surface Water | | X | | |
| Sediment | | X | | |
| Subsurf. Soil (e.g., >2 ft) | | X | | |
| Air (outdoors) | | X | | |

X — If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

— If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

— If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

Original human health environmental indicator determination made 3/31/1995 of CA725 = Yes, "human exposures under control". The original documentation was not found in EPA files, so

¹ "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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this replacement documentation is based on the April 23 & 27, 2001, "Termination of Administrative Order on Consent" correspondence and May 22, 2001 "Closure of Illegal Unit" memorandum attached to the end of this documentation.

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3. Are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

| “Contaminated” Media | Residents | Workers | Day-Care | Construction | Trespassers | Recreation | Food ³ |
|-------------------------------|-----------|---------|----------|--------------|-------------|------------|-------------------|
| Groundwater | ___ | ___ | ___ | ___ | | | ___ |
| Air (indoors) | ___ | ___ | ___ | | | | |
| Soil (surface, e.g., <2 ft) | ___ | ___ | ___ | ___ | ___ | ___ | ___ |
| Surface Water | ___ | ___ | | | ___ | ___ | ___ |
| Sediment | ___ | ___ | | | ___ | ___ | ___ |
| Soil (subsurface e.g., >2 ft) | | | | ___ | | | ___ |
| Air (outdoors) | ___ | ___ | ___ | ___ | ___ | | |

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not “contaminated” as identified in #2 above.
2. enter “yes” or “no” for potential “completeness” under each “Contaminated” Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential “Contaminated” Media - Human Receptor combinations (Pathways) do not have check spaces (“___”). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

- ___ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).
- ___ If yes (pathways are complete for any “Contaminated” Media - Human Receptor combination) - continue after providing supporting explanation.
- ___ If unknown (for any “Contaminated” Media - Human Receptor combination) - skip to #6 and enter “IN” status code.

Rationale and Reference(s):

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**⁴ (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

_____ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

⁴ If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

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5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

Current Human Exposures Under Control
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Contact telephone and e-mail numbers

| | |
|-----------|-------------------|
| (name) | Jeff Hunt |
| (phone #) | 206-553-0257 |
| (e-mail) | Hunt.jeff@epa.gov |

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

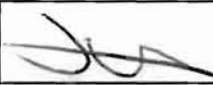
**Current Human Exposures Under Control
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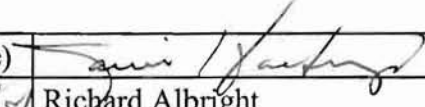
6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the _____ facility, EPA ID # _____, located at _____ under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

NO - "Current Human Exposures" are NOT "Under Control."

IN - More information is needed to make a determination.

| | | | | |
|--------------|-------------|---|------|---------|
| Completed by | (signature) |  | Date | 8/21/07 |
| | (print) | Jeff Hunt | | |
| | (title) | Environmental Protection Specialist | | |

| | | | | |
|------------|-----------------------|--|------|---------|
| Supervisor | (signature) |  | Date | 8/24/07 |
| | (print) | Richard Albright | | |
| | (title) | Director, Office of Air, Waste and Toxics | | |
| | (EPA Region or State) | Region 10 | | |

| |
|--|
| Locations where References may be found: |
| EPA files code WA0273 |

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final

2/5/99

**RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)**

Migration of Contaminated Groundwater Under Control

Facility Name: Okanogan Airport
Facility Address: AIRPORT RD, OKANOGAN, WA 98840--0000
Facility EPA ID #: WAD988480273

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

X If yes - check here and continue with #2 below.
 If no - re-evaluate existing data, or
 if data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program

the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)
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2. Is **groundwater** known or reasonably suspected to be "**contaminated**"¹ above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

_____ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

___ **X** ___ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

Original groundwater environmental indicator determination made 3/30/2000 of CA750NR = "No release to groundwater". The original documentation was not found in EPA files, so this replacement documentation is based on the April 23 & 27, 2001, "Termination of Administrative Order on Consent" correspondence and May 22, 2001 "Closure of Illegal Unit" memorandum attached to the end of this documentation.

¹ "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

**Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

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3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"² as defined by the monitoring locations designated at the time of this determination)?

- _____ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"².
- _____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"²) - skip to #8 and enter "NO" status code, after providing an explanation.
- _____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

² "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

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4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

_____ If yes - continue after identifying potentially affected surface water bodies.

_____ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

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5. Is the **discharge** of "contaminated" groundwater into surface water likely to be "**insignificant**" (i.e., the maximum concentration³ of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration³ of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration³ of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations³ greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

³ As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

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Environmental Indicator (EI) RCRIS code (CA750)
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6. Can the **discharge** of “contaminated” groundwater into surface water be shown to be “**currently acceptable**” (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented⁴)?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site’s surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,⁵ appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment “levels,” as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of “contaminated” groundwater can not be shown to be “**currently acceptable**”) - skip to #8 and enter “NO” status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter “IN” status code.

Rationale and Reference(s):

⁴ Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

⁵ The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

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7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"
- _____ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."
 - _____ If no - enter "NO" status code in #8.
 - _____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)
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| |
|--|
| Locations where References may be found: |
| File code W Ao273 |


Contact telephone and e-mail numbers

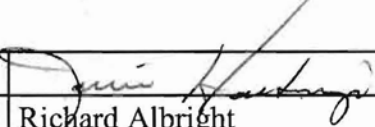
| | |
|-----------|-------------------|
| (name) | Jeff Hunt |
| (phone #) | 206-553-0256 |
| (e-mail) | Hunt.jeff@epa.gov |

**Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)
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8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

- YE** - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the Okanogan Airport facility, EPA ID # WAD 988480273 _____, located at Airport Road Okanogan. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.
- NO** - Unacceptable migration of contaminated groundwater is observed or expected.
- IN** - More information is needed to make a determination.

| | | | | |
|--------------|-------------|---|------|-----------|
| Completed by | (signature) |  | Date | 8/21/2007 |
| | (print) | Jeff Hunt | | |
| | (title) | Environmental Protection Specialist | | |

| | | | | |
|------------|-----------------------|--|------|---------|
| Supervisor | (signature) |  | Date | 8/24/07 |
| | (print) | Richard Albright | | |
| | (title) | Director, Office of Air, Waste and Toxics | | |
| | (EPA Region or State) | Region 10 | | |

| |
|--|
| Locations where References may be found: |
| |



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

April 23, 2001

WAD 0273


86

4/27/01

Reply To
Attn. Of: WCM-126

MEMORANDUM

**SUBJECT: Termination of the RCRA 3013 Administrative Order on Consent for Okanogan Airport Facility
EPA ID No. WAD 98878 0273**

FROM: Michael Fagan 
RCRA Compliance Officer

TO: Richard Albright
Director, Office of Waste and Chemicals Management

VIA: Jamie Sikorski
Manager, RCRA Compliance Unit

The United States Environmental Protection Agency ("EPA") issued an Administrative Order on Consent ("Order") on July 13, 1994 to the City of Okanogan, Washington ("Okanogan") under Section 3013 of RCRA. Section 3013 requires the owner or operator of a site to conduct monitoring, testing, analysis, and reporting as is deemed reasonable to ascertain the nature and extent of any potential for harm to human health or the environment. The Order tasked Okanogan to conduct a RCRA Facility Investigation ("RFI").

This memorandum summarizes the work that Okanogan has successfully completed and recommends that the 3013 Order be terminated. To close this Order requires that EPA issue an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" ("Acknowledgment") to Okanogan, which is signed by both parties (the Mayor of Okanogan and yourself).

Background

Okanogan operates a regional airport facility on fee land leased from the Colville Confederated Tribes. The airport is located on a bluff about ¼ of a mile south of the town. Since approximately 1973, until at least 1986, a private company operated an aerial pesticide spraying business at the airport. By a request from Okanogan, Washington Department of Ecology conducted an inspection of the airport on May 15, 1990 and found that soils were contaminated with various pesticides. A RCRA Facility Assessment ("RFA") in July 1991 identified the specific contaminated areas. Since the facility was located on tribal land, EPA

issued the Order to Okanogan. The RFA identified 4 Solid Waste Management Units ("SWMUs") and 4 Areas of Concern ("AOCs"). The SWMUs were a stormwater catchment basin, the basin drainage pipe, and 2 mixing/loading zones. The AOCs were various drainage ditches and outfalls from the SWMUs.

Okanogan submitted an RFI workplan to conduct the following actions: fully characterize the types of hazardous wastes released at the airport; identify all possible contamination to all media; investigate all exposure pathways; and establish media cleanup levels.

EPA, with authority under the Order, required Okanogan perform an Interim Removal Action at the most contaminated area of the airport. Okanogan removed the stormwater catchment basin and its drainage pipe, both of which had the highest concentrations of residual pesticides. The surrounding soils were excavated and subsurface soil samples were taken. Approximately, 45 tons of soil were excavated and disposed of. The summary and results of the Interim Removal Action were reported in the "Okanogan Airport RFI Final Report."

Surface soils were sampled in all the areas. In all but four (4) soil samples, the levels were below the risk level for a residential exposure scenario. However, all soil samples were below the risk level for an industrial exposure scenario. The industrial levels used for the screening were set according to "Guidelines for Developing Risk-Based Cleanup Levels at RCRA Sites in Region 10" (EPA 910/9-92-008)." The procedure for setting these levels is covered in the "Okanogan Airport RFI Risk-Based Screening and Technical Memorandum". The results of the soil sampling are summarized in the "Okanogan Airport RFI Final Report".

It was initially thought and planned that a hydrologic budget and modeling would be sufficient to preclude a standard groundwater investigation. After review, it was found that there was insufficient data (only one well at a similar elevation approximately ¼ mile away) to make any definitive conclusions about the likelihood of groundwater contamination. EPA then negotiated with Okanogan to have them sample various downgradient public and private wells as an alternative to drilling a sampling well at the airport. Later, however, Okanogan decided to go ahead with installing a well at the airport to gather hydrogeologic and groundwater data.

Okanogan drilled and installed a well at the location of the outfall of the drainage pipe mentioned before. Subsurface soil samples were collected during drilling. Groundwater was discovered at 191 feet. No contaminants of concern were detected in any of the groundwater samples. The nearest drinking water well, located approximately 1700 feet from the monitoring well, was also sampled and none of the contaminants of concern were detected. There was only one detection of one pesticide in the subsurface soil (at 6 feet - the outlet of the discharge pipe was at 3 feet). The concentration of this pesticide was below a level that would impact groundwater. The results of the groundwater sampling are summarized in the "Okanogan Airport RFI Supplemental Sampling and Analysis".

Okanogan did use an EPA model (PESTAN) to evaluate the potential for migration of pesticides to groundwater. Using the most conservative values, the model results predicted that pesticides in the surface soils would take approximately 1000 years to migrate the 190 feet to groundwater. Furthermore, the concentrations of pesticides found in all of the surface and subsurface soil samples were below a level that would negatively impact groundwater.

Fugitive dust that might contain pesticides was monitored during the soil sampling events and was shown not to be above an airborne exposure level. As for possible surface water contamination, there are no surface water bodies or springs at the airport. The nearest water body is the Okanogan River, approximately ¼ mile to the north. The annual precipitation for the area is approximately 12 inches. Evaporation is high enough such that the effective amount of precipitation that infiltrates the soil is about 1.5 inches a year. Because of this, runoff to surface water from the airport is highly unlikely and is also the main reason for the long migration time for pesticides to groundwater predicted in the PESTAN model. The above data were reported in the RFI Final Report.

There are no permanent residences at the airport. There are no endangered or threatened species that live in the vicinity of the airport. The airport is zoned as an industrial area. In summary, the likelihood of harm to human health or the environment is extremely low via air, surface water, or groundwater. There are some levels of pesticides found in the soils that are above a residential exposure scenario. However, the concentrations of pesticides found in soil samples are all below the level for an industrial exposure scenario. I believe that the potential for soil exposure can be addressed with an institutional control that can be agreed on by Okanogan, and possibly include it in the Acknowledgment. If that is the case, then it is recommended that no further action is required at the airport regarding corrective action.

The information and data collected by Okanogan are sufficient to make definitive conclusions about the types and levels of contamination at the airport. As such, Okanogan has completed the requirements of the Order to ascertain the nature and extent of any potential harm to human health and the environment. It is recommended that the Order be terminated at this time.

bcc: Bob Hartman, ORC
 Rene Fuentes, OEA

| CONCURRENCES | | | | POLICY FILE | |
|----------------------------------|------------------------------------|---------------------------------------|-------------------------------|---|-----------------------------|
| Initials | | | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Name: | Bob Hartman Regional Counsel | Rene Fuentes Hydrogeologist OEA | Jamie Sikorski RCU Manager | If policy file please bcc to RMSPU Manager | |
| Date: | | | | | |
| RCRAInfo EVENT | Yes <input type="checkbox"/> | No <input type="checkbox"/> | | | |
| SNC IDENTIFICATION | Yes <input type="checkbox"/> | No <input type="checkbox"/> | | | |
| (Can it be entered in RCRAInfo?) | Yes <input type="checkbox"/> | No <input type="checkbox"/> | | | |
| SBREFA INFO VERIFICATION | Yes <input type="checkbox"/> | No <input type="checkbox"/> | | | |
| PEER REVIEW | Yes <input type="checkbox"/> | No <input type="checkbox"/> | | | |
| REGION 9 POLICY FILE | Yes <input type="checkbox"/> | No <input type="checkbox"/> | | | |



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

WAD 0273
86
4/27/2001

APR 27 2001

Reply To
Attn. Of: WCM-127

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Honorable Michael Blake
Mayor of Okanogan
City of Okanogan
P.O. Box 752
Okanogan, Washington 98840

**Re: Termination of Administrative Order on Consent
EPA Docket No. 1092-05-07-3013
Okanogan Airport Facility
EPA ID No. WAD 98878 0273**

Dear Mayor Blake:

The United States Environmental Protection Agency ("EPA"), based on the information provided, has determined that the City of Okanogan ("Respondent" or "Okanogan") has successfully satisfied the requirements of the Administrative Order on Consent ("Order") regarding the Okanogan Airport Facility, including all required additional work. Enclosed is the proposed "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" ("Acknowledgment").

Please sign and return the enclosed Acknowledgment as soon as possible. Upon receipt of the signed Acknowledgment, EPA will sign the Acknowledgment and notify you by telephone when it is executed. The original will be filed with the EPA Region 10 hearing clerk, and a conformed copy of the fully-executed document will be sent to you.

Thank you for your cooperation in resolving this matter.

Sincerely,

Richard Albright, Director
Office of Waste and Chemicals Management

Enclosure

cc: Norm Butler, City of Okanogan
Gary Passmore, Colville Confederated Tribes



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

WA 0273
5/11/01
176

MAY 11 2001

Reply To
Attn Of: WCM-121

MEMORANDUM

SUBJECT: Okanogan Airport
Closure of Illegal Unit

FROM: Howard Orlean *Howard Orlean*
RCRA Permits Team

TO: Okanogan Airport File
WAD 988480273

This Memorandum is written in order to justify closing of a surface impoundment unit at the Okanogan Airport facility that was identified in RCRA Info as being an illegal unit. A stormwater catchment basin was identified as a solid waste management unit ("SWMU A") in a RCRA Facility Assessment (RFA) conducted in July 1991. Contaminants identified in sediment/sludge samples from SWMU A included; endosulfan, 2,4-D, malathion, azinphos methyl and silvex. Endosulfan, 2,4-D and silvex are are RCRA listed hazardous wastes under 40 CFR Part 261.

The following summarizes the history of investigations and clean up actions that occurred at the Okanogan Airport facility:

- In 1990, the Washington State Department of Ecology (Ecology) identified surficial and soil contamination during two sampling inspections. It is believed that the contamination resulted from the mismanagement of aerial chemical spray formulations, including pesticides.
- In 1991, EPA conducted an RFA which consisted of a review of existing environmental information, and inspection and identification of SWMUs and Areas of Concern (AOCs). The RFA identified four SWMUs and two AOCs on the facility as follows:
 - SWMU A Storm Water Catchment Basin;
 - SWMU A-1 Catchment Basin Discharge Point (outlet pipe);
 - SWMU B Chemical Mix and Load Zone;
 - SWMU C Original (Old) Chemical Mix and Load Zone;
 - AOC-1 Underground Fuel Storage Tanks; and
 - AOC-2 Ditches East and West of a Former Residential Trailer.
- In July 1994, the City of Okanogan as the operator of the facility signed a Consent Order

(Order) with EPA under Section 3013 of RCRA to conduct a RCRA Facility Investigation (RFI). The Order required the City to investigate the four SWMUs and AOC-2. AOC-1 was not included in the Order as the underground storage tanks were removed and remediated by the City prior to the Order being signed.

- In November 1994, the City of Okanogan conducted an Interim Removal Action at SWMU A and SWMU A-1. The catchment basin and associated piping were excavated, removed and disposed off site. Approximately 45 tons of contaminated soil were removed and sent off site to be incinerated at the APTUS hazardous waste incinerator in Utah. Confirmatory surface and subsurface soil samples were taken. Two surface soil samples were taken outside of the excavation. Five subsurface samples were taken from the bottom and sidewall of the excavation.
- In 1995, the City submitted a RFI Risk-Based Screening and Technical Memorandum (Memorandum) which calculated risk-based action levels based upon present and anticipated industrial usage of the airport. The Memorandum concluded that contaminants remaining at SWMU A were below the risk-based levels.
- In January 1997, the City of Okanogan submitted the Final RFI Report which documented the results of the confirmatory soil sampling taken at SWMU A and SWMU A-1. Contaminants detected at SWMU A (alpha-endosulfan, beta-endosulfan, 4,4-DDE, 4,4-DDT, malathion and methyl azinphos) were all below clean-up levels including EPA human health and draft ecological soil screening levels, Region 3 Risk-Based Concentrations and Region 9 Preliminary Remediation Goals.
- On April 27, 2001, EPA notified the City of Okanogan that the City had successfully satisfied the requirements of the Section 3013 Consent Order and that the Consent Order would be terminated. The Colville Confederated Tribes were notified about EPA's intent to terminate the Consent Order and the Tribes did not raise objections.

Remaining contaminant levels at SWMU A are below human health and ecological screening levels, therefore there is no need for additional clean-up action at this SWMU. SWMU-A should be considered as having met the closure performance standards at 40 CFR § 264.111 (a) and (b).